

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-61 (Canceled)

Claim 62 (New): A stable, soluble calcium phosphate complex that is obtainable by a process comprising the steps of:

(i) obtaining a solution of a phosphopeptide, wherein the phosphopeptide includes amino acid sequence Ser(P)-Ser(P)-Ser(P)-Glu-Glu (SEQ ID NO: 5);

(ii) admixing, under alkaline conditions, the solution of step (i) with calcium ions and inorganic phosphate, to obtain a mixture; and

(iii) isolating the complex from the mixture of step (ii).

Claim 63 (New): The complex of claim 62, wherein the alkaline conditions are pH of about 9.

Claim 64 (New): The complex of claim 62, wherein the amino acid sequence is selected from the group consisting of:

(SEQ ID NO: 1) Gln⁵⁹-Met-Glu-Ala-Glu-Ser(P)-Ile-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ile-Val-Pro-Asn-Ser(P)-Val-Glu-Gln-Lys⁷⁹
 $\alpha_{s1}(59-79);$

(SEQ ID NO: 2) Arg¹-Glu-Leu-Glu-Glu-Leu-Asn-Val-Pro-Gly-Glu-Ile-Val-Glu-Ser(P)-Leu-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ser-Ile-Thr-Arg²⁵ β (1-25);

(SEQ ID NO: 3) Asn⁴⁶-Ala-Asn-Glu-Glu-Glu-Tyr-Ser-Ile-Gly-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ser(P)-Ala-Glu-Val-Ala-Thr-Glu-Glu-Val-Lys⁷⁰ α_{s2} (46-70); and

(SEQ ID NO: 4) Lys¹-Asn-Thr-Met-Glu-His-Val-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ser-Ile-Ile-Ser(P)-Gln-Glu-Thr-Tyr-Lys²¹ α_{s2} (1-21).

G2
Cont.

Claim 65 (New): The complex of claim 64, wherein the amino acid sequence is:

(SEQ ID NO: 1) Gln⁵⁹-Met-Glu-Ala-Glu-Ser(P)-Ile-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ile-Val-Pro-Asn-Ser(P)-Val-Glu-Gln-Lys⁷⁹ α_{s1} (59-79).

Claim 66 (New): A stable, soluble calcium fluoride phosphate complex that is obtainable by a process comprising the steps of:

- (i) obtaining a solution of a phosphopeptide, wherein the phosphopeptide includes amino acid sequence Ser(P)-Ser(P)-Ser(P)-Glu-Glu (SEQ ID NO: 5);
- (ii) admixing, under alkaline conditions, the solution of step (i) with calcium ions, inorganic phosphate and fluoride ions, to obtain a mixture; and
- (iii) isolating the complex from the mixture of step (ii).

Claim 67 (New): The complex of claim 66, wherein the alkaline conditions are pH of about 9.

Claim 68 (New): The complex of claim 66, wherein the amino acid sequence is selected from the group consisting of:

(SEQ ID NO: 1) Gln⁵⁹-Met-Glu-Ala-Glu-Ser(P)-Ile-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ile-Val-Pro-Asn-Ser(P)-Val-Glu-Gln-Lys⁷⁹ α_{s1}(59-79);

(SEQ ID NO: 2) Arg¹-Glu-Leu-Glu-Glu-Leu-Asn-Val-Pro-Gly-Glu-Ile-Val-Glu-Ser(P)-Leu-Ser(P)-Ser(P)-Glu-Glu-Ser-Ile-Thr-Arg²⁵ β(1-25);

(SEQ ID NO: 3) Asn⁴⁶-Ala-Asn-Glu-Glu-Glu-Tyr-Ser-Ile-Gly-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ser(P)-Ala-Glu-Val-Ala-Thr-Glu-Glu-Val-Lys⁷⁰ α_{s2}(46-70); and

(SEQ ID NO: 4) Lys¹-Asn-Thr-Met-Glu-His-Val-Ser(P)-Ser(P)-Glu-Glu-Ser-Ile-Ile-Ser(P)-Gln-Glu-Thr-Tyr-Lys²¹ α_{s2}(1-21).

G2
Conf

Claim 69 (New): The complex of claim 68, wherein the amino acid sequence is:

(SEQ ID NO: 1): Gln⁵⁹-Met-Glu-Ala-Glu-Ser(P)-Ile-Ser(P)-Ser(P)-Ser(P)-Glu-Glu-Ile-Val-Pro-Asn-Ser(P)-Val-Glu-Gln-Lys⁷⁹ α_{s1}(59-79).

Claim 70 (New): A method of preparing a stable, soluble calcium phosphate complex comprising the steps of:

- (i) obtaining a solution of a phosphopeptide, wherein the phosphopeptide includes amino acid sequence Ser(P)-Ser(P)-Ser(P)-Glu-Glu (SEQ ID NO: 5);

- (ii) admixing the solution of step (i) with calcium ions and inorganic phosphate at a pH of above 7, to obtain a mixture;
- (iii) filtering the mixture of step (ii) to produce a retentate, and drying the retentate to isolate the complex.

C2
Cont.

Claim 71 (New): The method of claim 70, wherein step (ii) further comprises admixing the solution of step (i) with fluoride ions in addition to the calcium ions and inorganic phosphate.

Claim 72 (New): A stable, soluble calcium phosphate complex that is obtainable by the process of claim 70.

Claim 73 (New): A stable, soluble calcium phosphate complex that is obtainable by the process of claim 71.

VO

Claim 74 (New): A delivery vehicle for administering a complex of claim 62, 66, 72 or 73 to a target site, wherein the delivery vehicle is adapted to co-localize calcium and phosphate ions of the complex at the target site.

Claim 75 (New): The delivery vehicle of claim 74 that is selected from the group consisting of toothpaste, toothpowder, liquid dentifrice, mouthwash, troche, chewing gum, dental paste, gingival massage cream, gargle tablet and foodstuff.

Claim 76 (New): The delivery vehicle of claim 75, wherein the foodstuff is a dairy product.

Claim 77 (New): A method of treating or preventing dental caries or tooth decay, comprising administering a complex according to claim 62, 66, 72 or 73 to the teeth or gums of a subject in need of such treatment.

Claim 78 (New): A pharmaceutical composition comprising:

- (i) a complex of claim 62 or 67; and
- (ii) a pharmaceutical carrier or a delivery vehicle.

Claim 79 (New): The pharmaceutical composition of claim 78, wherein the complex is present in an effective amount for remineralising teeth or for inhibiting cariogenesis or tooth decay in a subject.

Claim 80 (New): The pharmaceutical composition of claim 78, wherein the complex is present in an effective amount for promoting calcium absorption in a subject suffering from a condition related to calcium loss, calcium deficiency or calcium malabsorption.

Claim 81 (New): The pharmaceutical composition of claim 80, wherein the condition is osteoporosis or osteomalacia.

Claim 82 (New): The pharmaceutical composition of claim 78, further comprising foodstuff.

Claim 83 (New): The pharmaceutical composition of claim 82, wherein the foodstuff is a dairy product.

Claim 84 (New): The pharmaceutical composition of claim 78, further comprising a dentifrice.

G2
Complex
Claim 85 (New): The pharmaceutical composition of claim 84, wherein the dentifrice is selected from the group consisting of toothpaste, toothpowder, liquid dentifrice, mouthwash, troche, chewing gum, dental paste, gingival massage cream and gargle tablet.

Claim 86 (New): A method for remineralising teeth or for inhibiting cariogenesis or tooth decay, comprising administering an effective amount of a complex of claim 62, 66, 72 or 73 to a subject in need thereof.

Claim 87 (New): A method for promoting calcium absorption in a subject suffering from a condition related to calcium loss, calcium deficiency or calcium malabsorption, comprising administering an effective amount of a complex of claim 62, 66, 72 or 73 to the subject.

Claim 88 (New): The method of claim 87, wherein the condition is osteoporosis or osteomalacia.